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10/605,785	10/27/2003	Nathan J. Lee	PU2180	2784

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EXAMINER
HSU, RYAN

ART UNIT	PAPER NUMBER
3714	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

In response to the amendments filed on 8/16/2006, claims 17 and 25 have been amended and claims 29-30 have been added. Claims 17-20 and 25-30 are pending in the current application. The statutory double patenting has been overcome and has been retracted.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 17-20 and 25-30 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,638,175. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are directed towards a diagnostic golf club that incorporates a plurality of strain gauges attached to the shaft. These strain gauges are linked with an internal memory device including non-volatile flash buffer memory capable of receiving and storing data from the strain gauges.

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The golf system taught by both the current application and the patent also implements a computer which has a interface mechanism that allows the multiple swings of the diagnostic golf club to be uploaded to the computer. The current application also incorporates the limitation that the computer uses the data related to the golf swing to calculate different forces and moments. However, this is an ability that is inherent in the design of a diagnostic golf system and therefore would have been obvious to one of ordinary skill in the art at the time the invention was made.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 19, and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US 3,792,863) and in view of Allen (US 4,940,236).

Regarding claims 17 and 25, Evans teaches a swing measurement and multi-swing display that comprises a diagnostic golf club comprising a club head [14], a shaft attached to the club head (*see Fig. 1 and the related description thereof*), a plurality of strain gauges attached to the shaft, the strain gauges capable of measuring data related to the golf club during a

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golf swing. Additionally, Evans teaches an internal memory device of a “console” (*ie: a computer*) located in a separate space for processing the respective outputs of the strain gauges and stores the results in the memory device (*see col. 2: ln 9-24*). The strain gauges taught by Evans provides the club with the ability to receive and store temporarily (*enough time to transfer it to the remote consol*) the information collected from the swing of the club. Evans teaches an interface mechanism that is coupled to the diagnostic golf club for providing communication between the diagnostic golf club and the computer (*ie: the FM transmitter (golf club) and receiver (in the console) (see elements [22,24,26,30] of Fig. 1 and the related description thereof, col. 2: ln 32-45*). Furthermore, Evans teaches a means for transferring the swing load measurements to the console (*see Figs. 1-2 and the related description thereof*). The console taught in Evans incorporates an internal memory device on the console to store data for multiple swings of the diagnostic golf club and then the data is uploaded to the console via the interface mechanism (*ie: information transmitted from the golf club to the console) (see Nth Digital Memory [40] of Fig. 1 and the related description thereof) (see elements [40,52] of Figs. 1 and the related description thereof, col. 2: ln 46-56, col. 3: ln 12-19*). Evans also teaches the ability wherein the computer/console uses the data related to the diagnostic golf club during a golf swing to calculate six independent forces and moments, the six independent forces and moments including axial force, transverse shear forces, bending moments, and torsion (*see Fig. 2 and the related description thereof*). However, Evans lacks in teaching the use of an internal memory device located in the golf club. Allen teaches in an analogous golf club the use of a distance computer built entirely into a golf club without significantly altering the swing-weight, total weight, feel, or durability of the club. Additionally, Allen teaches, an integrated circuit board

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that contains internal memory to store information from sensors to be mounted in the shaft parallel to the shaft access (*see Figs. 12-15 of the related description thereof, col. 4: ln 10-15, col. 8: ln 1-17*). This integrated circuit board enables the information to be stored and then displayed to the user. Therefore it would have been obvious to one of ordinary skill in the art, at the time of the applicant's invention to combine Allen's teaching of incorporating integrated circuit boards with internal memory devices into a club to process and store information and Evans system in order to create a computer aided diagnostics system that incorporates an internal memory device incorporated into a golf club without significantly changing the swing-weight and total experience for the player.

Regarding claims 19 and 26, Evans teaches a golf club system wherein the diagnostic golf club is selected from the group consisting of a driver, a fairway wood, an iron and a putter.

Regarding claim 27, Evans teaches a diagnostic golf club that comprises a club head, a shaft attached to the club head and means for measuring swing loads of a golfer during golf swing (*see col. 1: ln 58-col. 2: ln 24*). Evans incorporates a swing load measuring on the shaft of the diagnostic club in the form of strain gauges. The implementation of Allen distance calculator golf club implements elements of a computing device to collect information from a swing of the club (*see Figs 12-15, col. 2: ln 10-15, col. 8: ln 1-17*). Allen incorporates through its use of a computing device on the club to include memory devices to store the information collected from a swing of the club. Therefore although Evans and Allen teach the claimed invention except for a ring buffer memory they do incorporate the use of memory within the club device. As is old and well known in the computing arts all computers implement the use of a memory storage device that includes flash memory or random access memory (*ie: RAM*) among the various but

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limited types of memory available that are classified as non-volatile memory at the time the invention was made. Thus it would have been obvious to one of ordinary skill at the time the invention was made to implement a ring buffer memory as opposed to a generic RAM chip, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 18, 20, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans and Allen as applied to claims above, and further in view of Bouton (US 5,472,205).

In regards to claims 18, 20, and 28, Evans and Allen teach a diagnostic golf club that includes an internal memory device, a power control circuit, a signal conditioning circuit for the plurality of strain gauges and a communication circuit (*see Fig. 1, col. 1: ln 58-col. 2: ln 9*). As taught by Allen, a circuit board or interface mechanism may be fashion on the surface of the club or within any space where it may fit such as the hollow interior of the shaft (*see Figs. 12-13 and the related description thereof*). Therefore Evans and Allen teach the incorporation of an internal memory device, a power control circuit, a signal conditioning circuit for the plurality of strain gauges (*see Fig. 1 of Evans and Fig. 15 of Allen and the respective related description thereof*). However, they are both silent with regard to a serial communication circuit.

Bouton teaches an analogous video golf system that responds to a user swinging golf club and a sensing system in order to give feedback to the user. In Bouton's invention, he teaches the use of a microcontroller and a serial port transmitter to send information to a computer (*see col. 2: ln 31-48*). Bouton teaches that it is possible to send information in a variety of ways one of

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which is a serial data transmitter (*see col. 5: ln 29-54*). In addition the incorporation of a serial interface device includes the use of a plurality of pins and receptors to connect one device to another. Therefore one would be motivated to modify Evans invention to include a serial interface as a means for transmitting the diagnostic information as an obvious design choice. It would thereby be obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bouton with Evans in order to create a golf diagnostic device using a serial interface communication device to communicate between the golf club and a processing console.

Response to Arguments

Applicant's arguments filed 8/16/2006 have been fully considered but they are not persuasive. With regard to applicant's arguments regarding a lack of an internal memory device Examiner respectfully disagrees. All modern computer devices have some sort of internal memory devices. Although not specified Evans console device must have some sort of memory in order to store information. Additionally, the circuit board of Allen also includes internal memory in order to track the information gathered and in order to calculate the driving distance of the club hit. Although they all specify memory within the system they lack in explicitly stating non-volatile flash buffer memory. However, to one having ordinary skill in the art at the time of the applicant's invention, it would have been obvious to utilize non-volatile flash buffer memory in Allen's diagnostic golf club. One would be motivated to do so simply to update the diagnostic golf club memory to the present state of the art. Additionally, with regard to applicant's arguments that multiple swings may not be stored, Allen has simply been incorporated to teach the internal memory device however, Evans is incorporate to teach the

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ability to keep multiple swings within an internal memory device. The combination of Evans with Allen would then allow one of ordinary skill in the art to create an internal memory device in a golf club system that could keep multiple swings (*see memory [36, 38, 40] of Fig. 1 and the related description thereof*).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Hsu whose telephone number is (571)272-7148. The examiner can normally be reached on 9 :00-17:00.

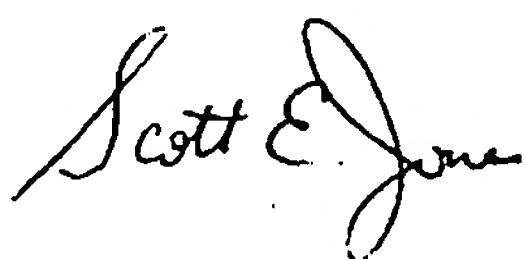
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert P. Olszewski can be reached on (571)272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



RH



October 26, 2006

SCOTT JONES
PRIMARY EXAMINER